

Impact of IFAD-Supported Value Chain Development Programmes on Women's Participation in Rice Value Addition in North Central Nigeria.

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Abstract: *The research was aimed at examining the efficacy of international funds for agricultural development -value chain development programme on women empowerment on Rice Value Addition in North Central Nigeria. Multi-stage sampling technique was used for the study. First stage was purposively selection of Benue and Niger States in North central. At the second stage, women (producers, processors and marketers of rice) beneficiaries in the programme was purposively selected from three (2) LGAs from each of the state making a total of 4 LGAs, The third and fourth stage involved a purposive selection of LGAs and communities in each State respectively. In all, a total of 243 respondents were selected from the LGA as the sample size for the study. The results showed that the mean age of the respondents in the study area was 49 years in Benue and 40 years in Niger state while the average family size was 8 and 13 person in Benue and Niger states respectively, and 64% and 68% were married in Benue and Niger states respectively, with almost 51.3% in Quranic education in Niger and also 21.7% with primary education in Benue state. 72.2% and 86.7% of participating women has access to extension agents in both Niger and Benue states respectively. The result in Table 4 revealed that in Benue State, the majority of the women (89.8%) were able to employ more labourers to work for them in their various enterprises also majority of the women (78.3%) reported they were now able to pay their children's school fees in Niger state. The study recommends the provision of targeted institutional support, increased access to productive resources, capacity-building programs, and inclusive policy frameworks to enhance women's participation in rice value addition. Expanding these opportunities will strengthen women's economic roles, improve productivity, and promote sustainable livelihood development.*

Keywords: Value, International, Chain, Programme, Efficacy.

Introduction: In Nigeria, women are key actors in agricultural production, processing, and value addition, particularly in rural communities where farming constitutes a primary livelihood activity. Despite their substantial contributions, women face systemic barriers such as limited access to land, agricultural inputs, credit facilities, extension services, education, and healthcare (NBS, 2022). These constraints significantly affect their productivity, income generation, and overall livelihood security. The overall performance of female in the project was enhanced putting their performance at 74.5% from the study, 70% of females said that the programme services and benefits such as tools, inputs, capacity building, mentoring and networking platforms are readily available and are also accessible by all members of their clustered groups especially those who have paid their matching grants for inputs and equipment. Women involvement in agriculture can extend beyond traditional farming to agribusiness and entrepreneurship. They are engaged in value addition, processing, marketing, and distribution of agricultural products. Government policies and

initiatives that promote women participation in agriculture, such as funding schemes, training programs and access to land, productive assets can encourage more women to enter the sector. Access to affordable financing options is crucial for women to start or expand agricultural ventures. Microfinance institutions and government-backed loan programs can help address this challenge. Providing relevant education and training in modern farming, processing techniques, agribusiness management, and marketing is essential to equip women with the necessary skills. It's important to acknowledge and address challenges such as access to land, productive asset for value addition and market volatility that can deter women from entering or staying in agriculture. Involving women in agriculture in Nigeria can be a viable strategy for reducing gender inequality, unemployment, boosting food security, and driving economic growth, reducing vulnerability, raising their status. However, it requires a multi-faceted approach involving government support, education, access to resources, and a focus on innovation and sustainability.

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Despite these challenges, Nigerian women are making strides in all areas of life and are becoming increasingly empowered to take control of their lives and their futures. In Nigeria, a woman has few rights within her home and family, even though it may be her sole world and environment. All over the country, a woman is considered to have no legal right to her own children, all property of the house is considered to belong to the man, even if it is paid for by the woman (Lucas, 2024). Women participation in Income-Generating Activities (IGAs) is a crucial mechanism for ensuring the rural development of developing countries. Consequently, over the past four decades, women's entrepreneurship has gained popularity around the world with a growing number of females to starting and running their own businesses Daniel, (2025). Women play different roles and perform different responsibilities concerning the livelihood of their households, men have the primary responsibility for income-earning and women have the primary responsibility for the utilization of food and home management in rural households Abera *et al.*, (2022). For years, the International Fund for Agricultural Development (IFAD) has been financing projects that seek to develop value chain with the specific aim of improving smallholder livelihoods and seeking to achieve gender equality, youth and women empowerment. Value chain development programme (VCDP) is one of such projects by the Federal Government of Nigeria (FGN) and IFAD which aims at enhancing productivity, promotion of agro-processing, access to markets and opportunities to facilitate improved engagement of the private sector and farmers organization in the development of effort. This programme takes a holistic and demand-driven approach to addressing constraints along the cassava and rice value chains, also aiming at poverty alleviation in the rural areas focusing more on the vulnerable group of which youths and women are part and in order to lift these set out of the poverty line, entrepreneurs trainings become important components in IFAD programmes National Bureau of Statistics, (2022).

While the FGN/IFAD assisted VCDP programme has continued to invest in rural people, most programmes benefits have always skewed in favor of men with the men being more visible than the females. This is because empowering women and girls can lead to the health and social development of families, communities, and countries as well as achieving gender equality. Value Chain Development Programme (VCDP) has earmarked thirty-five percent of the matching grants for women, enabling them to upgrade their production and processing technologies and capacities. In addition, the programme has applied the Gender Action Learning System, a community-led methodology for rural livelihood development and gender equality VCDP supervision report (2024).

Women play a vital role in Nigeria's rice value chain, particularly in processing, preservation, packaging, and marketing activities that contribute significantly to household income and food security. In North Central Nigeria, where rice production is a major agricultural enterprise, women constitute a substantial proportion of the labour force involved in value addition. However, despite their contributions, women continue to face persistent constraints, including limited access to productive resources, inadequate finance, low technological capacity, weak market linkages,

and restricted participation in decision-making processes. These structural barriers limit their productivity, income potential, and overall empowerment. The International Fund for Agricultural Development (IFAD), through its Value Chain Development Programme (VCDP), was designed to improve smallholder farmers' incomes and strengthen value chain participation, including that of women. While the programme aims to promote inclusive growth and women's economic empowerment within the rice value chain, there is limited empirical evidence on the extent to which these interventions have effectively enhanced women's access to resources, decision-making power, income control, and value addition capacity in North Central Nigeria.

Consequently, there remains a gap in understanding the actual efficacy of IFAD-VCDP interventions in transforming women's socio-economic status within the rice value chain. Addressing this gap is essential for informing policy decisions, strengthening programme design, and ensuring that development interventions translate into measurable empowerment outcomes for women in the region. The aim of this study is to critically examine the efficacy of the programme in improving the income-generation of the women in study area. Specifically, objectives of the study are to: describe the socio-economic characteristics of the women in the study area.; determine the income-generating activities carried out by women in the study area.; examine the efficacy of IFAD-VCDP on income and welfare of the beneficiaries; Identify the constraints faced and the strategies put in place that influence women participation in programme at the study area.

Methodology: Study Area: The study was conducted in two States, namely: Benue and Niger in north central, Nigeria, concentrating on cassava and rice value chains including rural infrastructure, capacity building, advisory services. Benue state lies between latitudes 6° 25' and 8° 8' N and longitudes 7° 47' and 10° 0' E. it occupies an area of 33,955 km². Having a population of 4,253,641 people in 2006 while the projected population is 6,141,300 (National Bureau of Statistics, 2022). Niger state is a state in the North Central region of Nigeria and the largest state in the country by area, it lies between latitude 09°61', 09°37' north of the equator and longitude 06°56', 06°32' east of the Greenwich meridian. The town shares boundary with the Federal Capital Territory from the north-west direction (Mohammed *et al.*, 2025). The population was 201,429 at the 2006 while the projected population is 6,783,300 (National Bureau of Statistics, 2022).

Sampling Procedure and Sample Size: The primary data was obtained through the use of pre-tested structured interview schedule. The instrument was designed to gather relevant information on the socio-economic characteristics of the women that participated in the Programme, identified the income-generating activities of the respondents, determined the specific agribusiness women were involved before the programme and identified the constraint faced by women and strategies put in place that influenced women participation in the study area. Multistage sampling procedure was used to obtain sample from the study area. Other stages involved. Purposive sampling technics was used

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in selection of beneficiaries which depends on high population of women in production, processing and marketing along rice value chains.

First stage, Benue and Niger States was purposively selected in the zone.

Second stage, women (producers, processors and marketers of rice) beneficiaries in the programme was purposively selected from three (2) LGAs from each of the state making a total of 4 LGAs, based on high population of women into production, processing and marketing along rice value addition. This gave a total of 4 LGAs selected.

Third stage, Gboko and Katsina-Ala Local Government Areas were purposively selected from Benue State, while Katcha and Kontagora were selected from Niger State. These areas were chosen due to their prominence as major rice-producing zones, consistent with the focus crops of the Value Chain Development Programme (VCDP). Additionally, the selected locations exhibit relatively high poverty rates and are classified among the economically vulnerable rural communities targeted by IFAD interventions (NBS, 2022).

Fourth stage involved a purposive selection of communities in each State respectively.

Fifth stage, Random sampling technics was used to select women respondents that is programme beneficiaries based on percentage and interviewed. Giving a total of 243 women respondents as the sample size for the study. The list of the beneficiaries was obtained from the IFAD-VCDP office.

Results and Discussions: The socio-economic characteristics of the respondents under consideration include age, contact with extension agent, marital status, house hold size and level of education. The result in table 2 revealed that the average age of women participating in the Value Chain Development Programme (VCDP) was 49 years in Benue State with 45.5% and 40 years in Niger State with 46.0%. This implies that a majority of the respondents are in their economically active and productive years. This finding is in line with the research conducted by Zakari *et al.* (2023), which reported a mean age of 42 years among women involved in rice processing under the IFAD-VCDP in Kogi State, Nigeria. The distribution of marital status for Benue State, as presented in Table 2, indicates that a significant proportion (64.1%) of the respondents were married, (25.0%) were single, while a smaller percentage of (10.9%) were widows. In Niger State, the marital status distribution revealed that the majority of the respondents, (67.8%), were married, followed by a smaller percentage of (7.8%) who were widowed, while (24.4%) were single. This finding agrees with the study by Mahmud & Hafsat, (2025), which stated that active involvement in such programmes leads to increased productivity, creativity, self-worth, and empowerment among women. The results on household size in Benue State revealed that a significant proportion (45.1%) of the respondents had a family size ranging from 1 to 5 persons while only a very small proportion, (0.7%), reported having 16 persons or more in their households. In Niger State, the household size distribution exhibited a slightly different pattern. A majority of the respondents (59.3%) had household sizes ranging between 6 and 10 persons, reflecting a predominance of moderately large

families, while only 0.6% reported households comprising 16 persons and above. The analysis further revealed that the mean household size in Benue State was 8 persons, compared to 13 persons in Niger State, indicating relatively large household sizes in both states. This finding corroborates Daniel (2025), who noted that large family sizes can provide a source of unpaid family labour, thereby reducing the cost of hiring external labour and enhancing capacity for farming and processing activities. Regarding educational attainment, Table 2 indicates that in Benue State, 48.5% of respondents had secondary education, 16.4% had tertiary education, and 11.7% reported Qur'anic education. In contrast, the educational profile in Niger State differed considerably: only 17.4% of respondents had secondary education, 21.7% had primary education, while the majority (51.3%) reported Qur'anic education. This distribution reflects the prevailing socio-cultural and religious context of the state. These findings are consistent with Abubakar *et al.*, (2024), who argued that limited formal education among women can constrain their understanding of technical information and impede entrepreneurial development and innovation capacity. However, the overall educational level of respondents in both states remains relatively low. This could cause a limitation in their ability to maximise the benefits of training and capacity-building programmes provided under VCDP. The results in Table 2 below show that the majority (86.7%) of the respondents in Benue State had access to extension agents, while (13.3%) reported having no contact with extension agents. Similarly, in Niger State, the majority of respondents (72.2%) had access to extension services, while (27.8%) had no contact with extension agents. The findings imply that agricultural extension services are well established and relatively effective in delivering critical support to women farmers involved in VCDP activities in both Benue and Niger States. This result aligns with the findings of Mathew *et al.* (2024), who stated that the high frequency of contact with extension agents shows a strong indication of the active presence of extension services in the study areas.

Income-generating activities carried out by women in the study area: Table 4.4 below shows the distribution according to Income-generating activities carried out by women in the study area, The VCDP activities mostly carried out by women in Benue and Niger States. The results show that: rice production (69.3%); rice processing (59.5%); rice marketing (62.7%); were the VCDP activities mostly involved by women in Benue State. In Niger State, the results show that: rice production (72.5%); %; rice marketing (71.0%); rice processing (63.9%) were the VCDP activities mostly patronized by women. This findings implies that women in the study area were involved in rice value chains but at varying degree of their interest. This result is in line with (Ebuka, *et al.*, 2024) who stated that agriculture has huge and diverse opportunities and potentials that cannot only create employment and transform the national economy but also tremendously impact the personal lives of the women. The VCDP activities that were also involved by women in Benue state, for additional income include: weeding (12.4%), harvesting (11.1%), threshing (11.1%), cleaning (12.5%), sorting (9.2%), rice parboiling (17.6%) , drying (16.3%),

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winnowing (13.7%), de-stoning (12.4%), grinding (12.4%), nutrient dense recipes (39.2%), petty trading (49.0%), Hair dressing (3.9%), food vendor (25.5%), stone crushing (0.7%) and tailoring (3.9%) and in Niger States for additional income also include: weeding (17.5%), harvesting (22.0%), threshing (25.4%), cleaning (26.6%), sorting (25.4%), rice parboiling (39.0%), drying (41.8%), winnowing (54.2%), de-stoning (39.5%), grinding (35.6%), nutrient dense recipes (5.6%), petty trading (32.2%), food vending (2.8%), stone crushing (0.6%) and tailoring (3.4%). This is in line with (Malik and Jerry, 2023) who reported from their study that one way to increase income while decreasing household vulnerability to shocks is to take advantage of different, diversified sources of income.

Efficacy of IFAD-VCDP on income and welfare of the beneficiaries in the study area

Women participating in Value Chain Development Programme (VCDP) activities in Niger and Benue states have shown improvements in their welfare, including increased income, better living conditions, and access to resources. The result in Table 4 revealed that in Benue State, the majority of the women (89.8%) were able to employ more labourers to work for them in their various enterprises. This outcome was largely due to the increased income generated through their participation in VCDP activities. Furthermore, (92.2%) of the women in Benue State confirmed they could now pay off their medical bills with ease, showing improved access to healthcare services, while (83.6%) reported being able to settle their house rent and utility bills, which indicates better housing security. About (85.2%) of the respondents also acknowledged that they were now able to pay their children's school fees, ensuring continuity in education for their families. High percentage of women (82.8%) reported an increase in their annual income. These findings are consistent with the report by David *et al.* (2024) in the study on the "Impact of Value Chain Development Programme (VCDP) on the Farmers in Bassa Local Government Area of Kogi State", which established that VCDP had positively influenced the livelihoods of (75.0%) of the farmers in the study area. In Niger State, the results from Table 4 revealed that majority of the women (78.3%) reported they were now able to pay their children's school fees, a critical indicator of improved household welfare and investment in future generations. Furthermore, (65.2%) of the women confirmed they could afford to pay their medical bills, which points to enhanced health outcomes and improved access to healthcare services. About (89.5%) were also able to employ additional labourers for their enterprises due to the increased income generated from participation in the VCDP. This research agrees with Daniel *et al.* (2025) on "Effect of Women's Development Projects in Improving the Social Welfare of the Beneficiaries.

Constraints faced and the possible solutions : The distribution of Strategies and factors influencing participation

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in income-generating activities in VCDP activities in the study area is shown in Table 5 below. In Benue State, results shows that very serious factors influencing participation of women in the VCDP activities show that majority (95.3%) of the women said Prioritizing women participation, (83.6%) Regular and prompt training, (94.5%) Capacity building, (79.7%) Form and strengthen more women-only groups were some of the factors that influenced the participation of women in the VCDP. This is in line with Marcel and Suleiman (2024) whom stated that women training and development have a number of positive effects on the social welfare of the beneficiaries, programme can help women to improve their economic status, health and empowerment, which can lead to a number of benefits for families and communities. In Niger State, results shows that very serious factors influencing participation of women in income generating activities in the VCDP activities show that majority (86.1%) of the women said Regular and prompt training, (74.0%) Prioritizing women participation, (61.7%) Forming and strengthen more women-only groups, (81.7%) Capacity building, (80.9%) Taking cognizance of women in various roles as actors in the rice value chains, (84.3%) Empower women to leverage on opportunities were among some of the factors that influenced the participation of women in the VCDP. This is in line with Marcel and Suleiman (2024) who posited that Women training and development have a number of positive effects on the social welfare of the beneficiaries, programme can help women to improve their economic status, health and empowerment, which can lead to a number of benefits for families and communities. This implies that women in the study area had high level of participation in a lot of VCDP activities but at varying degree of interest to them

Conclusion and Recommendations: To achieve a desired national transformation, the platform for women's involvement in leadership where gender sensitive interests can be expressed as critical because this will reduce their vulnerability. The need to view political participation as a continuous process will help to steady the rate of women's participation against a decline level. This is possible with a resilient political will and democratic leadership spirit, which is not limited to political parties but inclusive of trade unions, educational sector, employment, social institutions and with the growing recognition of the need to incorporate women into mainstream development projects in order to promote accountability and yield results, a conscious effort is needed to encourage women involvement in nation building. It is therefore recommended that the provision of targeted institutional support, increased access to productive resources, capacity-building programs, and inclusive policy frameworks to enhance women's participation in rice value addition. Expanding these opportunities will strengthen women's economic roles, improve productivity, and promote sustainable livelihood development

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APPENDIX

Table 1: Sampling procedure and sample size

S/N	STATE	LGA	VILLAGES SELECTED	NUMBER OF WOMEN SELECTED @ 15%
1	Benue	Gboko	Achin	12
			Agbel	8
			Chia	14
			Gboko	13
			Mbadim	13
			Pika	13
		Katsina-Ala	Katsina- ala	12
			Yooyo	12
			Iwaar	11
			Mbajir	5
2	Niger	Katcha	Katcha	15
			Edotsu	11
			Dzwafu	15
			Essa	16
			Gbakogi	5
		Kontagora	Alala	12
			Buda	4
			Ganawa	15
			Kamuka	18
			Maje	4
		TOTAL	243	

Source: Field survey, 2025

Table 2: Socioeconomic Characteristics of Respondents in Niger and Benue States

Variables	Niger (n=115) Freq (%)	Benue (n=128) Freq (%)
Age (years)		

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20-30	5 (2.3)	6 (3.0)
31-40	50 (46.0)	43 (35.3)
41-50	42 (40.7)	52 (45.5)
51-60	15 (9.8)	25 (15.2)
60 and above	3(1.2)	2 (1.0)
Mean	40	49
Marital Status		
Married	78 (67.8)	82 (64.1)
Single	28 (24.4)	32 (25.0)
Widow	9 (7.8)	14 (10.9)
Household Size (number)		
1 – 5	22 (19.0)	44 (34.4)
6 – 10	38 (33.0)	65 (50.8)
11 – 15	46 (40.0)	12 (9.4)
16 – 20	6 (5.1)	6 (4.7)
21 and above	3 (2.6)	1 (0.7)
Mean	13	8
Contact with Extension Agent		
Yes	83 (72.2%)	111 (86.7%)
No	32 (27.8%)	17 (13.3%)
Primary education		
Qur'anic education	59 (51.3)	15 (11.7)
Secondary education	20 (17.4)	62 (48.5)
Tertiary education	11 (9.6)	21 (16.4)

Source: *Field survey, 2025*

Table 3: Income-generating activities carried out by women after the programme in the study area

Income-Generating Activities	Niger (n=115)	Benue (n=128)

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Rice Production	64 (36.2%)	106 (69.3%)
Rice Processing	103 (58.2%)	91 (59.5%)
Rice Marketing	12 (6.8%)	96 (62.7%)
Weeding	31 (17.5%)	19 (12.4%)
Harvesting	39 (22.0%)	17 (11.1%)
Threshing	45 (25.4%)	17 (11.1%)
Cleaning	47 (26.6%)	16 (10.5%)
Sorting	45 (25.4%)	14 (9.2%)
Rice Parboiling	69 (39.0%)	27 (17.6%)
Drying	74 (41.8%)	25 (16.3%)
Winnowing	96 (54.2%)	21 (13.7%)
Rice De-stoning	70 (39.5%)	19 (12.4%)
Rice Grinding	63 (35.6%)	19 (12.4%)
Nutrient-dense Recipe	10 (5.6%)	60 (39.2%)
Petty Trading	57 (32.2%)	75 (49.0%)
Hair Dressing	0 (0.0%)	6 (3.9%)
Food Vendor	5 (2.8%)	39 (25.5%)
Stone Crushing	1 (0.6%)	1 (0.7%)
Tailoring	6 (3.4%)	6 (3.9%)

Source: *Field survey, 2025*

Table: 4 Income & Welfare Status of Respondents in Niger and Benue States

Variables	Niger (n=115) Freq (%)	Benue (n=128) Freq (%)
Increase in Income Annually	92 (80.0)	106 (82.8)
Purchase of Additional Land for Rice Farm	65 (56.5)	60 (46.8)
Employing of More Laborers	103 (89.5)	115 (89.8)
Increase in Laborer Wages/Salaries	58 (50.4)	74 (57.8)
Savings for Future Occurrence	75 (65.2)	96 (75.0)
Participation in Family Programmes	87 (75.6)	110 (86.0)
Adoption of Innovative Crop Practices	64 (55.7)	79 (61.7)
Access to Clean Water	88 (76.5)	98 (76.6)
Payment of Children's School Fees	90 (78.3)	109 (85.2)
Access to Modern Education	89 (77.4)	90 (70.3)
Payment of House Rent and Bills	83 (72.3)	107 (83.6)
Purchase of Mobility	57 (50.0)	106 (82.8)
Purchase of Household Equipment	62 (54.0)	94 (73.4)
Payment of Medical Bills	75 (65.2)	118 (92.2)
Change of Residence	43 (37.4)	58 (45.3)

Source: Field Survey, 2025

Variable	B/VS (Freq)	B/S (Freq)	B/NS (Freq)	N/VS (Freq)	N/S (Freq)	N/NS (Freq)
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Taking cognizance of women in various roles as actors in the rice value chains	110(86.0)	44(28.8)	0(0.0)	93(80.9)	44(24.9)	0(0.0)
Access to land	48(37.5)	112(73.2)	5(3.3)	76(66.1)	53(29.9)	4(2.3)
Access to production and processing machines/equipment	85(66.4)	60(39.2)	1(0.7)	81(70.4)	45(25.4)	11(6.2)
Access to financial services/credit	55(43.0)	84(54.9)	13(8.5)	99(86.1)	45(25.4)	33(18.6)
Access to water	71(55.5)	77(50.3)	15(9.8)	111(96.2)	51(28.8)	7(4.0)
Access to processing center	86(67.2)	34(22.2)	23(15.0)	80(69.5)	22(12.4)	45(25.4)
Access to market stalls and store	56(43.8)	41(26.8)	58(37.9)	94(81.7)	26(14.7)	57(32.2)
Empower women to leverage on opportunities	102(79.7)	39(25.5)	2(1.3)	97(84.3)	42(23.7)	8(4.5)
Capacity building	121(94.5)	37(24.2)	0(0.0)	94(81.7)	42(23.7)	1(0.6)
Price subsidy (Input, equipment)	100(78.1)	45(29.4)	0(0.0)	70(61.0)	49(27.7)	8(4.5)
Prioritizing women participation	122(95.3)	30(19.6)	1(0.7)	85(74.0)	29(16.4)	3(1.7)
Regular and prompt training	107(83.6)	36(23.5)	0(0.0)	99(86.1)	29(16.4)	0(0.0)
Form and strengthen more women-only groups	102(79.7)	41(26.8)	0(0.0)	71(61.7)	36(20.3)	0(0.0)

Table 5: Distribution of constraints faced and the strategies put in place that influence women participation in programme at the study area.

Source: Field Survey, 2025.

B= Benue, N=Niger, VS=very serious S= serious, NS=not serious, WS=weighted sum, WM=weighted Mean